

Serial No. 10/695,785

Attorney Docket No. 01-472 - RCE

LISTING OF CLAIMS:

The following listing of claims replaces all previous versions and listings in the present application.

1. (Currently amended) A dynamic quantity sensor comprising:

a sensor chip including a movable portion at one surface side thereof and a silicon layer at another surface side thereof, wherein the movable portion is displaced under application of a dynamic quantity and the silicon layer is separated from the movable portion by an insulator; and

a circuit chip communicating with the sensor chip, wherein the circuit chip is disposed to confront the one surface of the sensor chip through a gap portion and to cover the movable portion, and the sensor chip and the circuit chip are bonded to each other around the gap portion so that a bonding portion is formed that substantially surrounds and seals the gap portion, wherein the gap portion is sealed by sealing the sensor chip, the circuit chip and the gap bonding portion, wherein the movable portion is disposed within the sealed gap portion,

wherein the sensor chip and the circuit chip are sealingly wrapped by mold material, and

wherein the sensor chip and the circuit chip are sealed by soft material softer than the mold material, and the outside of the soft material is wrapped by the mold material.

2. (Canceled)

3. (Withdrawn – previously presented) The dynamic quantity sensor according to claim 1, wherein:

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a recess portion is formed on a surface of the circuit chip facing the sensor chip to thereby form the gap portion; and

the bonding portion is formed at sites other than the recess portion on the circuit chip.

4. (Withdrawn – previously presented) The dynamic quantity sensor according to claim 1, wherein the sensor chip is designed to have a plurality of movable portions formed on one surface thereof, and the circuit chip covers each of the plurality of movable portions through the gap portion.

5. (Previously presented) The dynamic quantity sensor according to claim 1, further comprising a lead frame for transmitting electrical signals to an exterior, wherein the sensor chip is bonded to the lead frame on another surface opposite to the one surface of the sensor chip facing the circuit chip.

6. (Withdrawn – previously presented) The dynamic quantity sensor according to claim 1, further comprising a lead frame for transmitting the electrical signals to an exterior, wherein an overhang area that does not face the sensor chip and that overhangs from the sensor chip is equipped on the surface of the circuit chip that faces the sensor chip, and the lead frame is bonded to the overhang area on the circuit chip.

7. (Withdrawn – previously presented) The dynamic quantity sensor according to claim 1, wherein an overhang area that does not face the sensor chip and that overhangs from the sensor

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chip is equipped on the surface of the circuit chip that faces the sensor chip, and a separate chip separated from the sensor chip is equipped to the overhang area on the circuit chip so that the circuit chip is supported by the separate chip.

8. (Previously presented) The dynamic quantity sensor according to claim 1, wherein the sensor chip and the circuit chip are electrically connected to each other by bonding wires.

9. – 10. (Canceled)

11. (Withdrawn – currently amended) The dynamic quantity sensor according to claim [[10]]1, wherein:

a recess portion is formed on a surface of the circuit chip facing the sensor chip to thereby form the gap portion; and

the bonding portion is formed at sites other than the recess portion on the circuit chip.

12. (Withdrawn – currently amended) The dynamic quantity sensor according to claim [[10]]1, wherein the sensor chip is designed to have a plurality of movable portions formed on one surface thereof, and the circuit chip covers each of the plurality of movable portions through the gap portion.

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13. (Withdrawn – previously presented) The dynamic quantity sensor according to claim 12, wherein a rim portion abutting against the sensor chip is formed at a site on the circuit chip facing areas other than the area having the plurality of movable portions formed therein on the sensor chip.

14. (Withdrawn – currently amended) The dynamic quantity sensor according to claim [[9]]1, wherein:

a recess portion is formed on a surface of the circuit chip facing the sensor chip to thereby form the gap portion; and

the bonding portion is formed at sites other than the recess portion on the circuit chip.

15. (Withdrawn – currently amended) The dynamic quantity sensor according to claim [[9]]1, wherein the sensor chip is designed to have a plurality of movable portions formed on one surface thereof, and the circuit chip covers each of the plurality of movable portions through the gap portion.

16. (Withdrawn – previously presented) The dynamic quantity sensor according to claim 15, wherein a rim portion abutting against the sensor chip is formed at a site on the circuit chip which faces areas other than the area having the plurality of movable portions formed therein on the sensor chip.

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17. (Withdrawn – currently amended) The dynamic quantity sensor according to claim [[9]]1, further comprising a lead frame for transmitting the electrical signals to an exterior, wherein an overhang area that does not face the sensor chip and that overhangs from the sensor chip is equipped on the surface of the circuit chip that faces the sensor chip, and the lead frame is bonded to the overhang area on the circuit chip.

18. (Withdrawn – currently amended) The dynamic quantity sensor according to claim [[9]]1, wherein an overhang area that does not face the sensor chip and that overhangs from the sensor chip is equipped on the surface of the circuit chip that faces the sensor chip, and a separate chip separated from the sensor chip is equipped to the overhang area on the circuit chip so that the circuit chip is supported by the separate chip.

19. (Withdrawn – currently amended) The dynamic quantity sensor according to claim [[9]]1, wherein a plurality of sensor chips is bonded to the circuit chip.

20. (Currently amended) A dynamic quantity sensor comprising:

a sensor chip including a movable portion at one surface side thereof, wherein the movable portion is displaced under application of a dynamic quantity; and

a circuit chip for communicating with the sensor chip, wherein the circuit chip is disposed so as to confront one surface of the sensor chip through a gap portion and to cover the movable portion, and wherein the sensor chip and the circuit chip are partially bonded to each

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other around the gap portion, wherein the movable portion is disposed within a sealed gap that is sealed by sealing the sensor chip and circuit chip,

wherein the sensor chip and the circuit chip are sealingly wrapped by mold material, and wherein the sensor chip and the circuit chip are sealed by soft material softer than the mold material, and the outside of the soft material is wrapped by the mold material.

21. (Previously presented) The dynamic quantity sensor of claim 20, wherein a spacer substantially surrounds the gap portion, wherein the spacer has a predetermined thickness for separating the circuit chip from the movable portion.

22. (Previously presented) The dynamic quantity sensor of claim 1, wherein the bonding portion comprises a spacer having a predetermined thickness for separating the circuit chip from the movable portion.